

GENERAL SUBJECT:		NUMBER:
Revisions to Chapter V of the Materials Division Manual of		MD 275 - 06
Instructions		
SPECIFIC SUBJECT:		DATE: May 26, 2006
Sampling and Control of Asphalt Concrete		
DIRECTED TO:	SIGNATURE:	
District Administrators	Andrew Mergenmeier, PE	
	Signature on original copy of memorandum	

This Memorandum serves to notify users of the Materials Division Manual of Instructions that Chapter V Sampling and Control of Asphalt Concrete has been revised. A major stimulus for the revision to the manual is due to federal funds flowing into the maintenance program (plant mix schedule).

These changes were initiated by the District Materials Engineers in the Spring of 2005 to make the Quality Assurance (QA) and Independent Assurance (IA) programs in the asphalt field operations more efficient and manageable while meeting the intent of the Code of Federal Regulations. The changes clarify the amount and frequency of QA testing and IA observations that are required when federal funds are used on the National Highway System (NHS). The Federal Highway Administration supports these revisions. The new version of Chapter V can be downloaded from VDOT Materials Division website:

http://www.virginiadot.org/business/resources/bu-mat-MOI-5.pdf

The new version of the VDOT Materials Division's Manual of Instructions Chapter V is similar to the previous version dated March 2004. The majority of the text is the same but the order, format and layout of the material has been rearranged. Introductory paragraphs of Section 501 have been expanded to summarize the VDOT quality management program. A table shows what types of projects IA and QA testing is required. The former Section 504 which outlined Quality Assurance testing responsibilities by VDOT in the Hot Mix Asphalt (HMA) plant and field as well as the Quality Control testing responsibilities of the producer and contractor have been merged into the plant operations (section 502) and the field operations (section 503) sections. The new sections are now sub-sectioned into VDOT and contractor duties within the areas of HMA plant testing and field testing. This revision to Chapter V does not affect the producers' operations, testing procedures or testing frequency.

The major change is in the manner in which VDOT will conduct the Independent Assurance (IA) program for asphalt field density. Under this new program, VDOT will observe the density testing being performed in the field. Tables and examples have been added to aid the VDOT technicians in determining how many IA observations and QA tests are required based on the tonnage of material being placed. The QA procedures remain consistent with the previous version of Chapter V.

Section 502.04 of Chapter V was updated to show current desktop computer procedures used in data processing of IA data. This section had not been updated since the mid 1980's when Materials division used a mainframe computer system with input forms and report forms. The plant testing portion of this section was not changed. The language was reviewed and in a few instances modified, but the overall procedures are the same. The initial Independent Assurance comparison (Table 2 D2S comparison) of the monitor data was modified. The data comparison is based on the percentage passing a sieve size. The table is modeled after the current AASHTO T 30 precision and bias tables. The method of determining payment based on standard deviations and point adjustments remains the same and is still performed according to VTM 59.

In summary the major changes in order of appearance in the Manual of Instructions are:

- 1. Section 501- Introductory paragraphs summarizing the VDOT Quality management program and a table showing what types of projects IA and QA testing is required.
- 2. Section 501.02 Inclusion of Temperature Checks (MD 252-05) was added to the project inspector's duties
- 3. Section 502.04 Inclusion of Approval of Job Mixes (MD 262-05) was added.
- 4. Section 502.06 D2S Table 2 based on the percentage passing a sieve replaced the older Table.
- 5. Section 502.08 QA/IA Test review guidance for Materials Technicians when analyzing plant data.
- 6. Section 503.03 A table showing the number of QA density tests and IA observations was added (Table 3).
- 7. Section 503.04 Description and procedure for IA observations by VDOT of field density testing was added.
- 8. Section 503.05 Description and procedure for IA of VDOT QA density personnel was added.
- 9. Section 503.06 An example on how to determine the amount of QA and IA testing needed on a project was inserted.

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